

NSLS User Access Policy

The National Synchrotron Light Source (NSLS) is a dedicated synchrotron radiation facility available to scientists and researchers worldwide. The mission of the NSLS is to support our users in doing outstanding science in a safe and environmentally friendly manner. This document outlines the general policies for user access to the NSLS. It is designed to achieve the following objectives:

- Ensure open and fair access to the NSLS by the scientific community at large
- Sustain the highest standards of scientific and technical excellence
- Responsive and adaptable to varying user needs and funding realities

1. Modes of User Access

The methods for obtaining beam time at the NSLS are listed below.

1.1 General Users

General Users (GUs) are individuals or groups, including NSLS staff, who need access to beam time to carry out their research using either Facility or Participating Research Team (PRT) Beamlines. They typically only supply samples, but can also provide custom instrumentation or endstations for the duration of their experiments.

General Users apply for access by submitting a scientific proposal that is evaluated by the Proposal Review Panel (PRP). The proposal is given a rating and a recommended beam time allocation by the PRP. Beam time requests must be made for each scheduling cycle. The amount of beam time allocated to the proposal in a given cycle depends on the rating of the proposal relative to other proposals requesting beam time, on beam time availability, and on demonstrated progress from previous cycles (if applicable). If the proposed experiment continues beyond two years, a new proposal must be submitted and undergo a new review by the PRP.

The proposal is valid for multiple visits and may request and be assigned time on more than one beamline. Beam time allocations are made by the NSLS Beam Time Allocation Committee (BTAC).

1.2 Contributing Users

Contributing Users (CUs) are individuals or groups who carry out research at Facility Beamlines and also enhance their capabilities or contribute to their operation. CUs typically develop instrumentation in some manner, bringing external financial and/or intellectual capital into the development of the beamlines or making an external contribution to the operation of the beamlines. NSLS staff may be CU members with the approval of the NSLS Chair if external funding supports their efforts. CU contributions must be made available at no charge to the General Users and so benefit them as well as enhance the capabilities of the facility. To encourage involvement and in exchange for supporting the GU program, CUs may be recognized for their investments by receiving a specified percentage of beam time on one or more beamlines.

for a period of up to three years, with the possibility of renewal. One or more CU groups may be awarded beam time on a given Facility beamline, but the total CU time will be limited so that at least 50% of the available beam time is allocated to General Users. CU proposals will be reviewed and approved by the NSLS Scientific Advisory Committee.

If a CU is comprised of more than one member, a Memorandum of Understanding must be established between CU members describing the contributions and responsibilities of each CU member. An Agreement must also be established between the NSLS and the CU to describe the privileges and obligations of both parties. Items specified in the Agreement include allocation of beam time and/or laboratory space to CUs, the obligation of the CU to maintain or operate contributed instrumentation for GUs, an understanding as to who would make improvements to facilities and/or equipment, and an agreement to follow NSLS policies regarding equipment damage (see section titled, “Equipment Damage”). The agreement will remain in effect until its expiration date unless revoked by the NSLS Chair with approval of the NSLS SAC.

CUs have an additional responsibility to provide safety training for GUs working with their equipment as well as safety training and oversight for CU members working at the beamline. Details of these responsibilities are provided in the NSLS ES&H policy.

1.3 Participating Research Teams

Participating Research Teams (PRTs) are a special case of a Contributing User group in which the PRT has brought in external funds to build, maintain, staff and operate a beamline. PRTs are obligated to provide at least 25% of the available beam time for use by General Users and to provide training and assistance to General Users who are allocated beam time on their beamline. In exchange, the PRT has complete control over the beamline and manages its scientific program for up to 75% of the remaining available beam time for a period of up to three years, with the possibility of renewal. PRT members may not apply for General User beam time on their own beamline, but they may apply for GU beam time on other beamlines. PRT proposals will be reviewed and approved by the NSLS Scientific Advisory Committee.

A Memorandum of Understanding must be established between PRT members describing the contributions and responsibilities of each PRT member. NSLS staff may be PRT members with the approval of the NSLS Chair if external funding supports their efforts, but the NSLS may not be an institutional member of a PRT. An Agreement must also be established between the PRT and the NSLS to describe the privileges and obligations of both parties. Items specified by the Agreement include allocation of beam time and laboratory space to the PRT, the obligation of the PRT to maintain and operate the beamline and its endstations, to staff the beamline, to make improvements in facilities, to work jointly with the NSLS to promote use of the PRT beamline by GUs, to make beamline facilities accessible to GUs at no charge, to support GUs accessing the beamline facilities, and to agree to follow NSLS policies regarding equipment damage and completion of the PRT program. The agreement will remain in effect until its expiration date unless revoked by the NSLS Chair with approval of the NSLS SAC.

PRTs have an additional responsibility to provide safety training and oversight to ensure that PRT members and General Users operating at their beam lines or with their equipment understand and comply with applicable NSLS safety requirements. Details of these responsibilities are provided in the NSLS ES&H policy.

1.4 Chair's Discretionary Time

Up to 5% of each facility beamline is available for Chair's discretionary time. For example, this might be used for feasibility studies. Contact the NSLS Associate Chair for the User Science Division for more information.

1.5 Proprietary Research

Users of the facilities include academic, industrial and government scientists and engineers. While the vast majority of user research should be in the public domain, and so must be disseminated by publication in the open literature, there may be access for a reasonable percentage of proprietary research that utilizes these unique facilities to benefit the national economy. Proprietary research is defined as that for which users request confidentiality of proposal, data and results for a certain period of time. Proprietary research is conducted under a Class Waiver for Proprietary Users of Energy Research Designated User Facilities. Prior to commencing work, any institution conducting proprietary research is required to sign a Proprietary Use Agreement with Brookhaven National Laboratory. Users conducting proprietary research may access beam time as either General Users, Contributing Users, or as members of a PRT. Efforts will be made to secure appropriate intellectual property control for proprietary users to permit them to exploit their experimental results.

Proprietary research is the only mode of user access for which there is a charge for beam time. Full cost recovery will be obtained for proprietary research. Proprietary research is charged based on actual beam time used plus a specified amount for start up and close out. Actual beam time used will be determined based on the elapsed time between when the beamline is enabled and disabled for the experiment.

Proprietary research will be reviewed by the NSLS Chair, who makes an approved/denied decision based on the value of the proposed research and the demand for GU beam time on the requested beamline. Once approval is given to a Proprietary proposal, this proposal is given priority for allocation of beam time.

1.6 Classified Research

Classified Research can be performed at the NSLS. Extensive discussions with the NSLS Chair must take place in advance of such research. Due to extensive security requirements, such research is not generally encouraged at the NSLS.

2. Types of Beamlines

2.1 Facility Beamlines

Facility Beamlines are controlled and managed by the NSLS. At least 75% of the available beam time on each Facility Beamline will be allocated to General Users, and one or more Contributing Users, with at least 50% of the available beam time going to General Users. Of the remaining beam time, up to 20% of the beam time can be utilized by beamline staff for maintenance or upgrades of the beamline. Under special circumstances, the beam time available on a beamline in a given cycle may be less than 100%, such as during a major upgrade of the beamline. Up to an additional 5% can be used for Chair's discretionary time.

2.2 PRT Beamlines

PRT beamlines are controlled and managed by the PRT, whose staff members operate the beamline. The NSLS will design and construct the front end of the beamline. The NSLS will retain ownership of the front end and be responsible for its maintenance. The NSLS will also design and maintain the personnel safety interlock system and vacuum protection system.

2.3 Diagnostic and Instrumentation Beamlines

The NSLS may establish a small number of beamlines for facility needs for machine diagnostics, detector development, or instrumentation and/or technique development. These Diagnostic and Instrumentation Beamlines are not open to the General User program.

3. Peer Review and Advisory Bodies

The key to delivery of outstanding science is rigorous peer review that is fair, clear, expedient and sensitive to the needs of users. The following advisory committees play key roles in providing this.

3.1 Scientific Advisory Committee

The NSLS will have a Scientific Advisory Committee (SAC) that advises the facility Chair and Associate Laboratory Director on policies related to the optimization of the quality and quantity of the scientific productivity of the facility. The SAC provides guidance on issues such as the terms of the Agreements between the facility and its CUs and PRTs, whether the CUs and PRTs are fulfilling the terms of their Agreements and are maintaining the highest quality of research and utilization of beam time, facility budget priorities, and the conduct of performance evaluations. The SAC will be composed of distinguished scientists from both inside and outside the synchrotron radiation community. Delegates are not allowed to substitute for SAC members at SAC meetings. Appointments to the SAC are made by the facility Chair in consultation with the Associate Laboratory Director based on nominations from the user community, the facility management, and its advisory bodies.

3.2 Users' Executive Committee

The NSLS has a Users' Executive Committee (UEC) of the NSLS Users' Association that is elected by the user community at large. The UEC serves as the official voice of the user

community in its interactions with NSLS management. The UEC elects its Chair and Vice-Chair from among its members, and the UEC Chair has an *ex officio* seat on the SAC.

3.3 Proposal Review Panels

Evaluation of General User proposals is carried out by appropriately constituted Proposal Review Panels (PRPs). Every effort is made to ensure the confidentiality of proposals and they are not generally made available outside of the PRPs that evaluate them. The rank order of scores generated by the PRPs is the primary input in the allocation of General User beam time. The PRP will provide feedback to the investigators on the quality of their proposals and, where relevant, on perceived weaknesses. The PRP will consist only of scientists external to the NSLS and with expertise in various research fields using synchrotron radiation. Appointment to the PRPs will be made by the facility Chair or designee based on input from the user community and suggestions from NSLS management.

3.4 Evaluation Criteria

The evaluation criteria used in the peer review procedures will take as their starting point the criteria proposed by the International Union of Pure and Applied Physics in its recommendations on the operation of major user facilities, which are:

- Scientific merit
- Technical feasibility
- Capability of the experimental group
- Availability of the resources required

These criteria may be supplemented with additional requests, for example to justify the need for the higher performance of an undulator beamline. The paramount criterion will be the scientific merit of the individual proposal.

3.5 Appeal of a Proposal Rating

The rating received on a proposal may be appealed in cases where a complete description of the proposed experiment was provided, but the reviewers' comments make it evident that the proposed project was not correctly understood or was given a low rating inappropriately. The appeal will be reviewed by the NSLS Associate Chair for User Science. The NSLS SAC will provide oversight of the proposal rating appeal process.

4. Beam Time Allocation

4.1 Beam Time Allocation for General Users

Allocation of beam time for General Users on all beamlines will be performed by the NSLS Beam Time Allocation Committee (BTAC). NSLS management will have ultimate responsibility for effective and efficient utilization of beam time on all beamlines.

4.2 Beam Time Allocation for PRT Members

PRTs will manage their scientific program and allocate beam time among their members.

4.3 Beam Time Allocation for CUs

CUs will manage their scientific program and allocate beam time among their members subject to the following: for each cycle, prior to the submission deadline for GU proposals, CUs must declare the number of days they will utilize, up to their total award for the upcoming cycle. If no declaration is made or the declaration is not timely, the entire allocation on that beamline will be transferred for use by GUs.

4.4 Unanticipated Loss of Beam Time

For all facility users, a loss of beam time due to events beyond the control of the NSLS will not be recompensed. This includes accelerator failure and the catastrophic failure of a major beamline component.

5. Environment, Safety, and Health Responsibilities

All users, regardless of the mode of their access to the NSLS, are required to abide by the NSLS requirements for safety, including timely submission of Safety Approval Forms (SAFs), successful completion and maintenance of required training, and other additional requirements identified in the safety reviews or training program applicable to the research of the user. Failure to adhere to these requirements can result in suspension or revocation of the user's access to the NSLS.

6. Equipment Damage

GUs are required to follow all procedures that have been established to safeguard beamline and endstation instrumentation. Failure to adhere to these procedures can result in suspension or revocation of the user's access to the NSLS. In the unfortunate event that a GU, CU, or PRT member damages CU or PRT instrumentation, the NSLS is not responsible for repairing or replacing the instrument. It is expected that the researcher who damaged the instrumentation will act in a responsible manner. If the damaged instrument is an integral component of the CU or PRT program and not repaired or replaced, then the CU or PRT program is subject to reevaluation by the NSLS SAC.

7. Disposition of Beamline Instrumentation

If the PRT or CU Agreement is not renewed or is terminated prematurely, the members of the PRT or CU are obligated to submit a plan to the NSLS Chair, within 45 days of the cessation of operations, covering disposition of the beamline equipment. The PRT or CU are responsible for removing all PRT- or CU-owned instrumentation from the beamline unless a prior arrangement has been agreed upon between the PRT or CU and the NSLS.

8. Reporting Requirements

8.1 All NSLS Users

An NSLS end-of-run form will be completed at the conclusion of each experiment.

Non-Proprietary Users are required to submit to the NSLS citations for all publications and information pertaining to any patents resulting from experiments that utilize one or more NSLS beamlines. The following acknowledgment must be used when referencing work done at the NSLS: "Use of the National Synchrotron Light Source, Brookhaven National Laboratory, was supported by the U.S. Department of Energy, Office of Science, Office of Basic Energy Sciences, under Contract No. DE-AC02-98CH10886."

8.2 Participating Research Teams

The PRT is required to submit an annual progress report to the NSLS. If PRT performance does not meet expectations as stated in the PRT Agreement, the PRT is subject to termination by the NSLS Chair with approval of the NSLS SAC.

8.3 Contributing Users

The CU is required to submit an annual progress report to the NSLS. If the CU performance does not meet expectations as stated in the CU Agreement, the CU is subject to termination by the NSLS Chair with approval of the NSLS SAC.

9. Laboratory Space on the Experimental Floor

Space on the experimental floor will be allocated in accordance with the following priorities, in order of importance:

1. Space for processing and assembly of samples used in facility user science programs.
2. Space for assembly and testing of new end station instrumentation.
3. Only after the preceding needs are satisfied can space be used as office space or for short-term storage.

Laboratory space on the experimental floor is reserved for experimental setup or short-term storage of end station instrumentation. Long-term storage of equipment on the experimental floor is not permitted. Storage and office space may be available in areas nearby, possibly at cost to the user.

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